

Figure 3: Areas Potentially Affected by Historical Smelter Emissions (Based on Data Available as of January 2003)

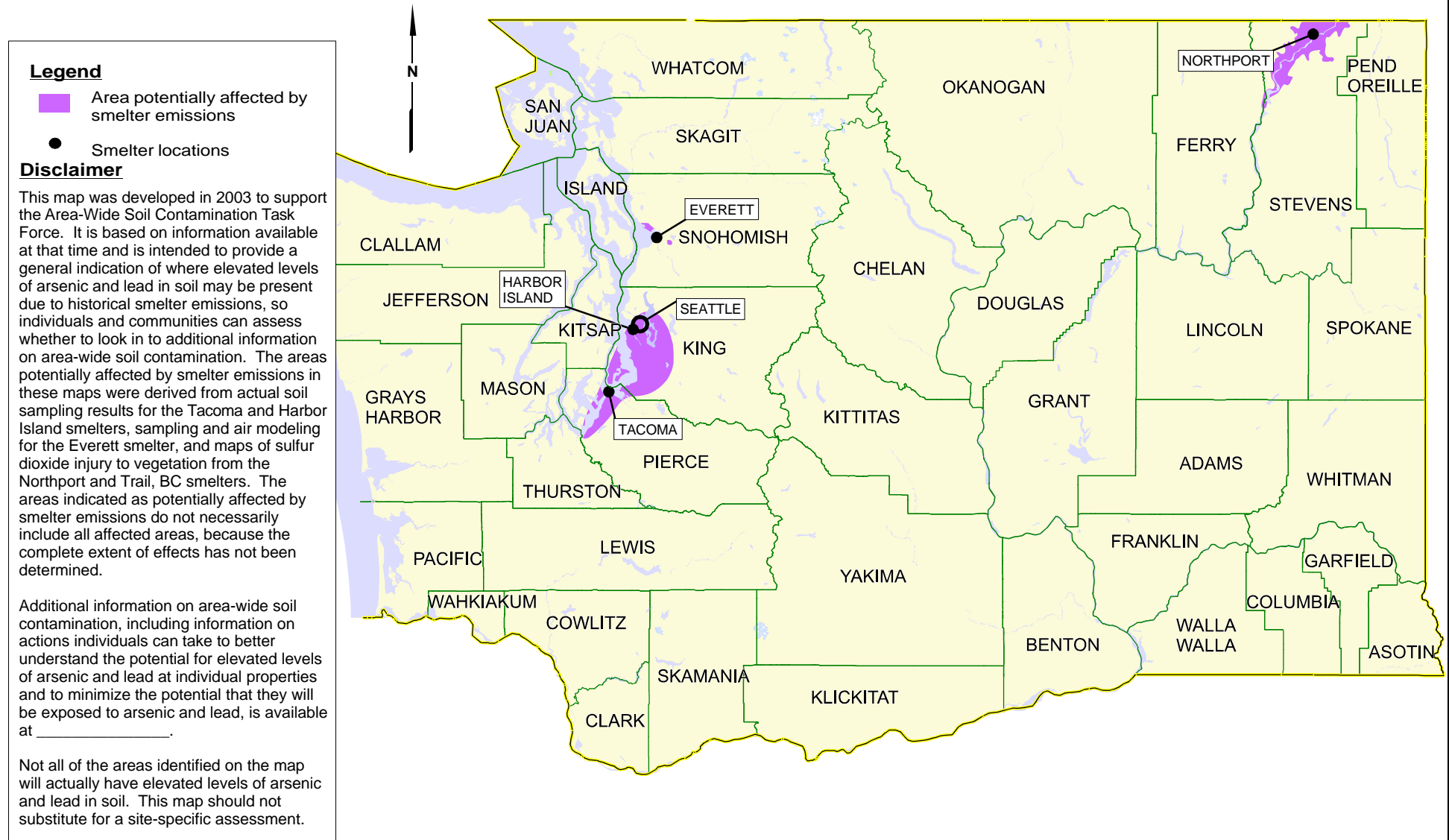
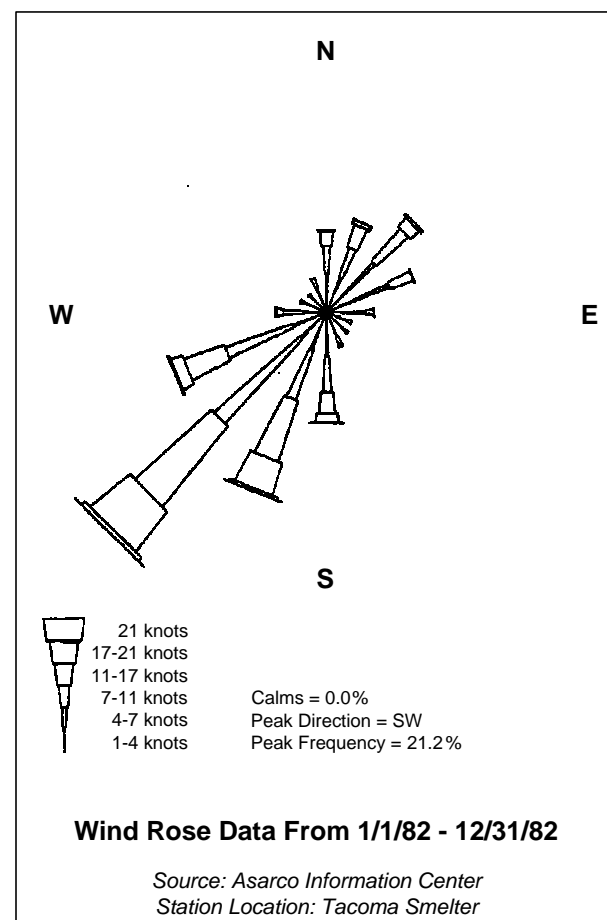
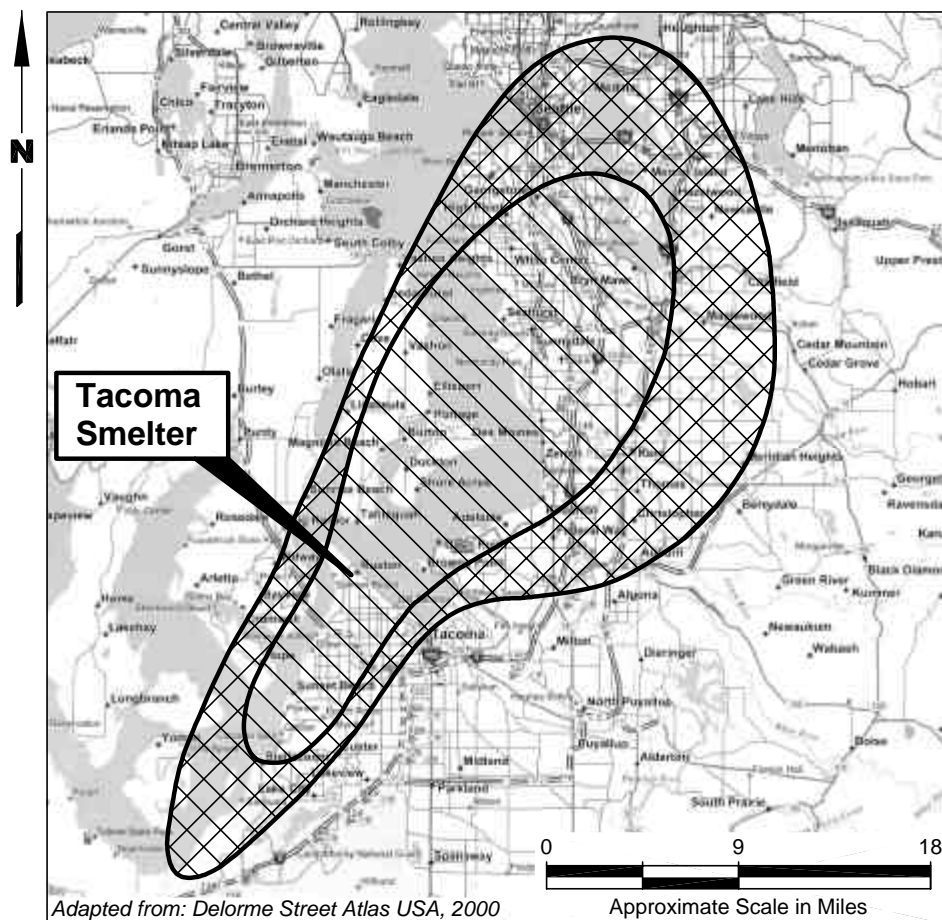
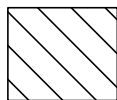



Figure 4: Area Affected by Historical Tacoma Smelter Emissions with Wind Rose Diagram of Predominant Wind Directions at the Smelter Site (Based on Data Available as of January 2003)



Legend

 Level 1: Area where shallow undisturbed soil likely exceeds 20 ppm Arsenic

 Level 2: Area where shallow undisturbed soil occasionally exceeds 20 ppm Arsenic

Data Sources:
Ecology, 2002
Glass, 2002

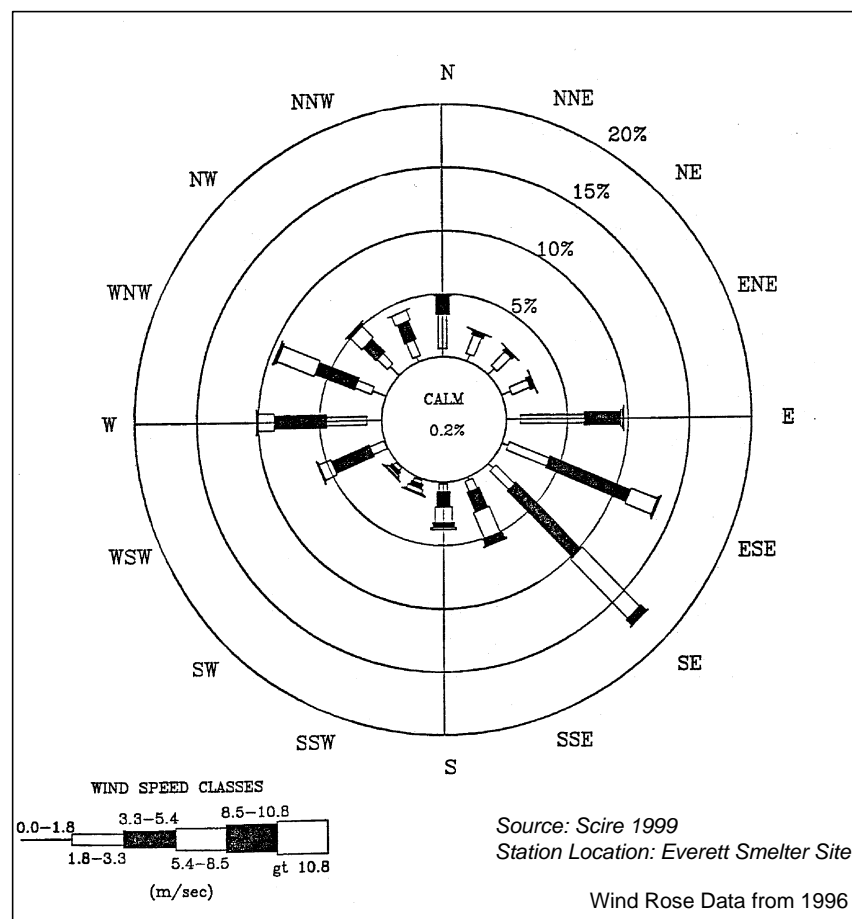
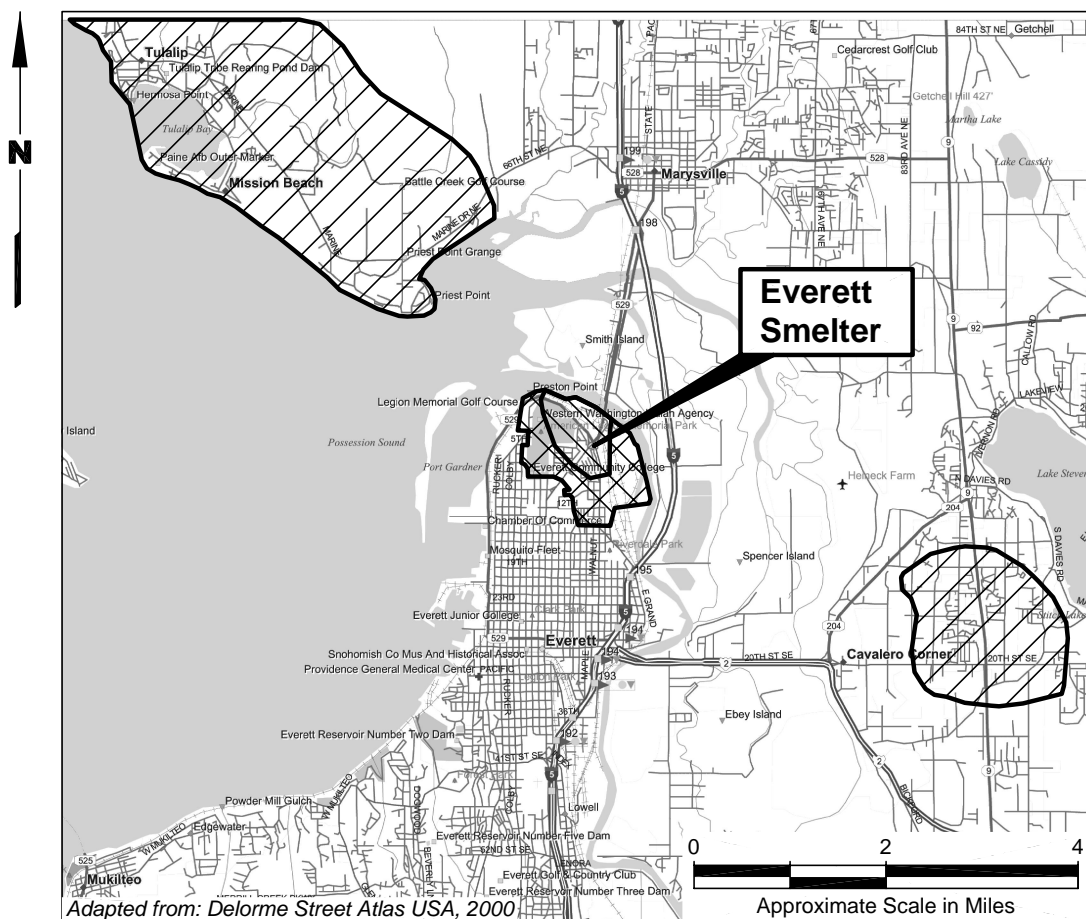
Interpreting a Wind Rose

A wind rose is a quantitative graphical summary of the wind direction and speed for a given time. The wind rose diagram shows the number of hours (expressed as a percentage) that the wind blew from a particular direction and speed. The wind rose spokes or arms represent 16 points of the compass. The length of each segment of a spoke represents the percentage of time the wind speed was within a specific speed interval for a particular direction (the longer the spoke, the greater the time that the wind blew from that direction). If summed for all wind directions, the result would provide the percentage of all hours the wind speed was measured within a specific interval. The percentage of time when the winds were light and variable is shown in the center of the rose.

Disclaimer

The map of the area affected by smelter emissions was originally developed in 2003 for the Landau Associates report "Preliminary Estimates, Area-wide Contamination Strategy, Washington State". They are based on information available at that time and are intended to provide a general indication of where elevated levels of arsenic and lead in soil may be present due to historical smelter emissions, so individuals and communities can assess whether to look into additional information on area-wide soil contamination. Additional information on area-wide soil contamination, including information on actions individuals can take to better understand the potential for elevated levels of arsenic and lead at individual properties and to minimize the potential that they will be exposed to arsenic and lead, is available at [www.asarco.com](#).
Not all of the areas identified on the map will actually have elevated levels of arsenic and lead in soil. This map should not substitute for a site-specific assessment.

Figure 5: Area Affected by Historical Everett Smelter Emissions with Wind Rose Diagram of Predominant Wind Directions at the Smelter Site (Based on Data Available as of January 2003)



Legend

- Level 1: Area where shallow soil likely exceeds 20 ppm Arsenic
- Level 2: Area where shallow soil occasionally exceeds 20 ppm Arsenic
- Level 3: Area where modeling predicted most likely particulate deposition from former furnace stack

Data Sources:
 Ecology, 1999
 Scire, 1999

Interpreting a Wind Rose

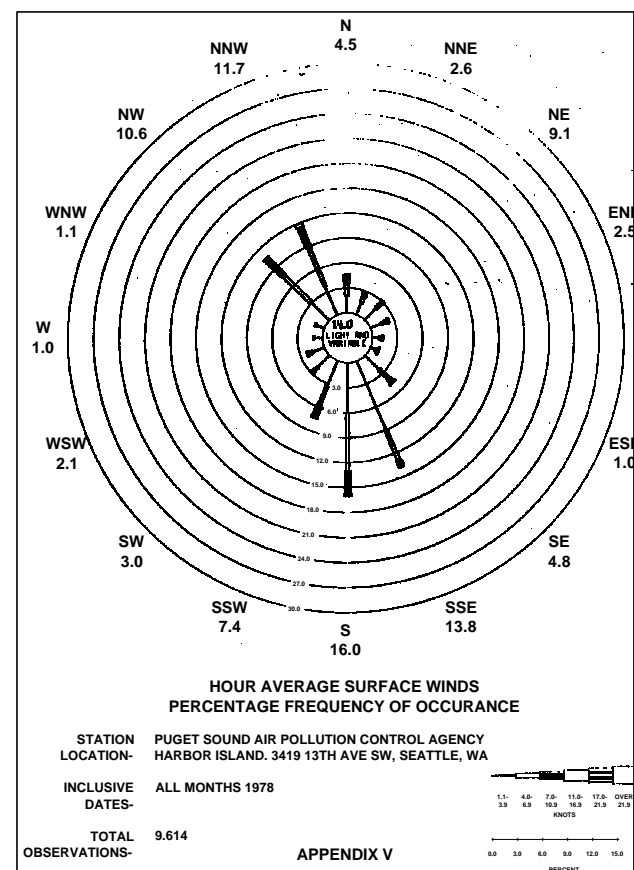
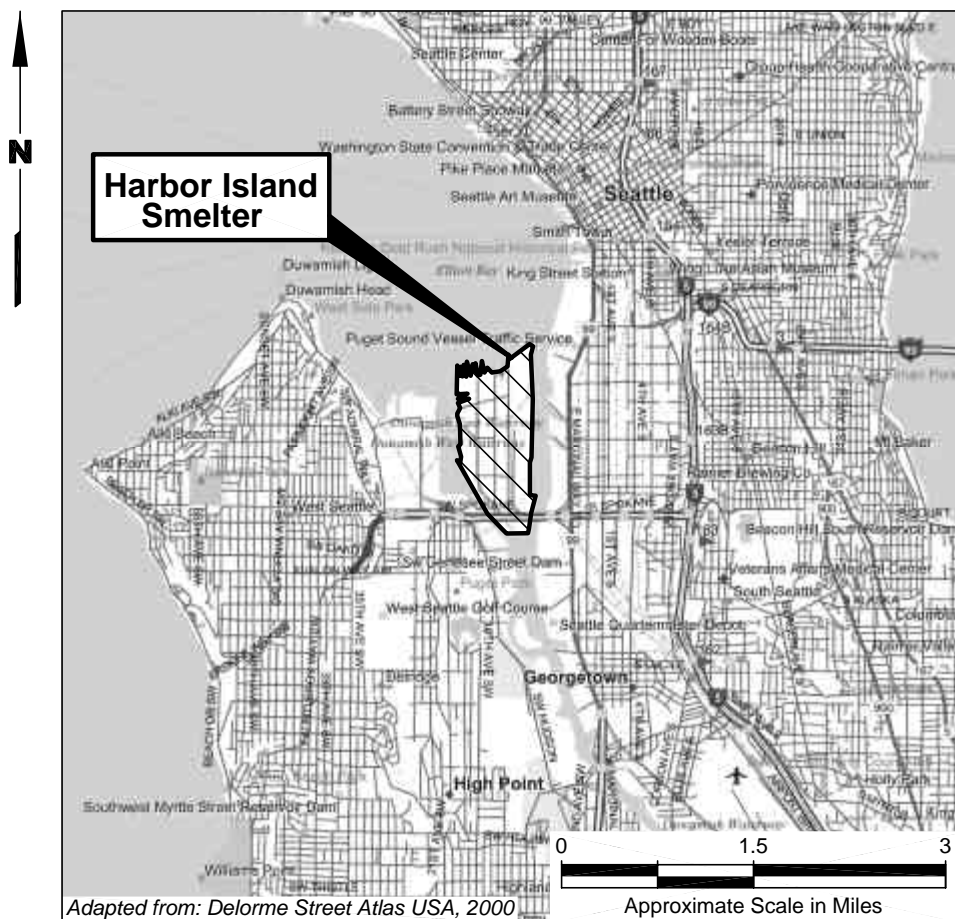
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Figure 6: Area Affected by Historical Harbor Island Smelter Emissions with Wind Rose Diagram of Predominant Wind Directions at the Smelter Site (Based on Data Available as of January 2003)



Legend



Level 1: Area where shallow soil likely exceeds 250 ppm Lead

Data Source: Weston, 1993

Interpreting a Wind Rose

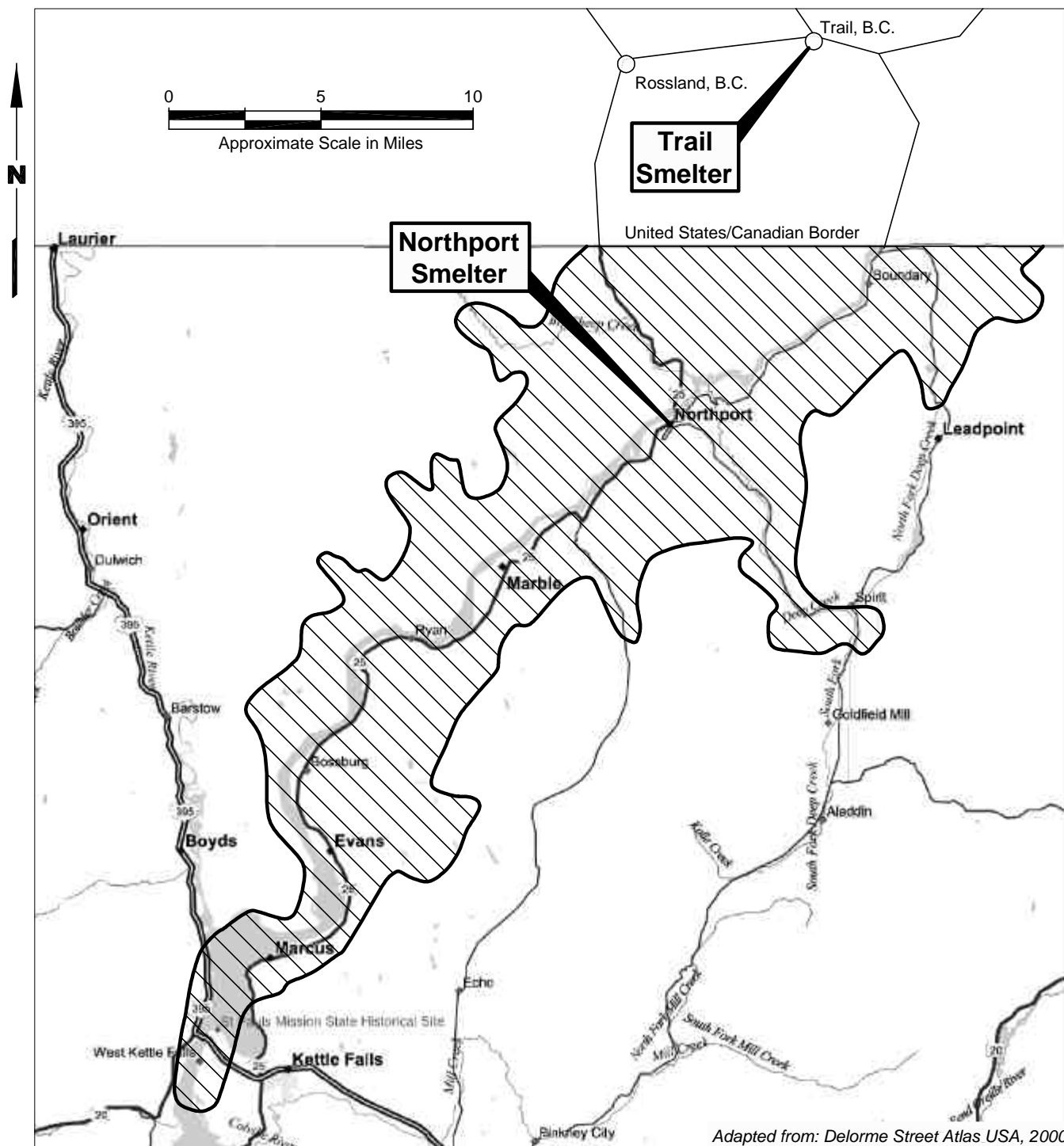
A wind rose is a quantitative graphical summary of the wind direction and speed for a given time. The wind rose diagram shows the number of hours (expressed as a percentage) that the wind blew from a particular direction and speed. The wind rose spokes or arms represent 16 points of the compass and are labeled by wind direction. The percentage of time the wind blew from a given direction is expressed by percentage for that direction on the perimeter of each rose. The length of each segment of a spoke represents the percentage of time the wind speed was within a specific speed interval for a particular direction (the longer the spoke, the greater the time that the wind blew from that direction). If summed for all wind directions, the result would provide the percentage of all hours the wind speed was measured within a specific interval. The percentage of time when the winds were light and variable is shown in the center of the rose.

Disclaimer

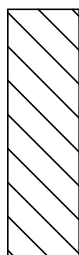
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**Figure 7: Area Potentially Affected by Emissions from the Northport and Trail, BC Smelters
(Based on Data Available as of January 2003)**



Legend

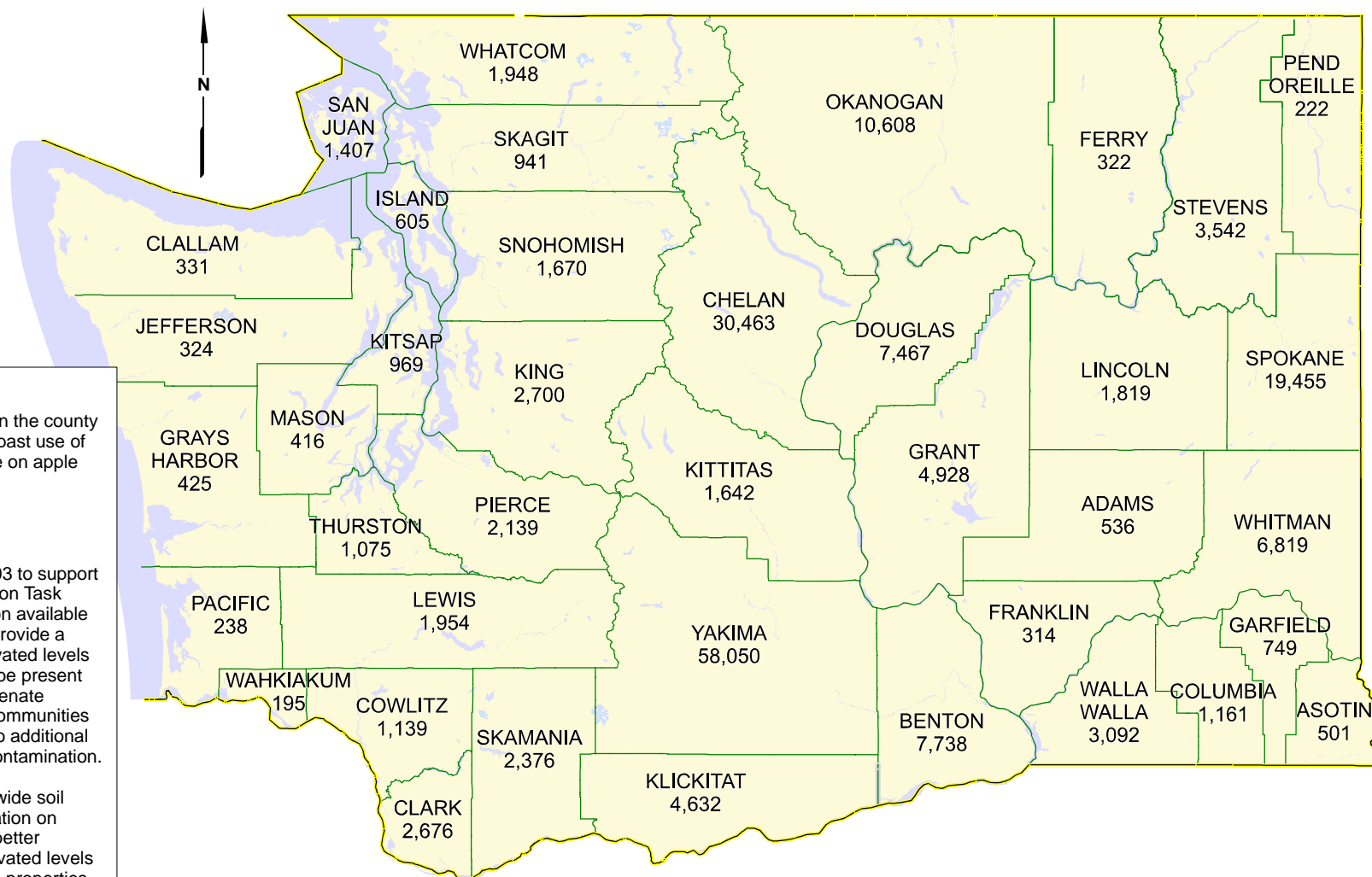


Level 1: Area where smelter smoke damage to vegetation documented in 1929. Damage attributed to SO₂ emissions. Source: After Wirth, 2000

Disclaimer

This figure was originally developed in 2003 for the report "Preliminary Estimates, Area-wide Contamination Strategy, Washington State" by Landau Associates. It is based on information available at that time and is intended to provide a general indication of where elevated levels of arsenic and lead in soil may be present due to historical smelter emissions, so individuals and communities can assess whether to look into additional information on area-wide soil contamination. Additional information on area-wide soil contamination, including information on actions individuals can take to better understand the potential for elevated levels of arsenic and lead at individual properties and to minimize the potential that they will be exposed to arsenic and lead, is available at [www.wa.gov/arsenic](#). Not all of the areas identified on the map will actually have elevated levels of arsenic and lead in soil. This map should not substitute for a site-specific assessment. The area potentially affected by smelter emissions is only shown for Washington State, not Canada.

Figure 8: County Acreage Potentially Affected by Historical Use of Lead Arsenate Pesticide on Apple and Pear Orchards



Legend

1,948 Number of total acres in the county potentially affected by past use of lead arsenate pesticide on apple and pear orchards

Disclaimer

This map was developed in 2003 to support the Area-Wide Soil Contamination Task Force. It is based on information available at that time and is intended to provide a general indication of where elevated levels of arsenic and lead in soil may be present due to historical use of lead arsenate pesticides, so individuals and communities can assess whether to look in to additional information on area-wide soil contamination.

Additional information on area-wide soil contamination, including information on actions individuals can take to better understand the potential for elevated levels of arsenic and lead at individual properties and to minimize the potential that they will be exposed to arsenic and lead, is available at _____.

Figure 9: Areas Potentially Affected by Historical Use of Lead Arsenate Pesticide in Chelan County

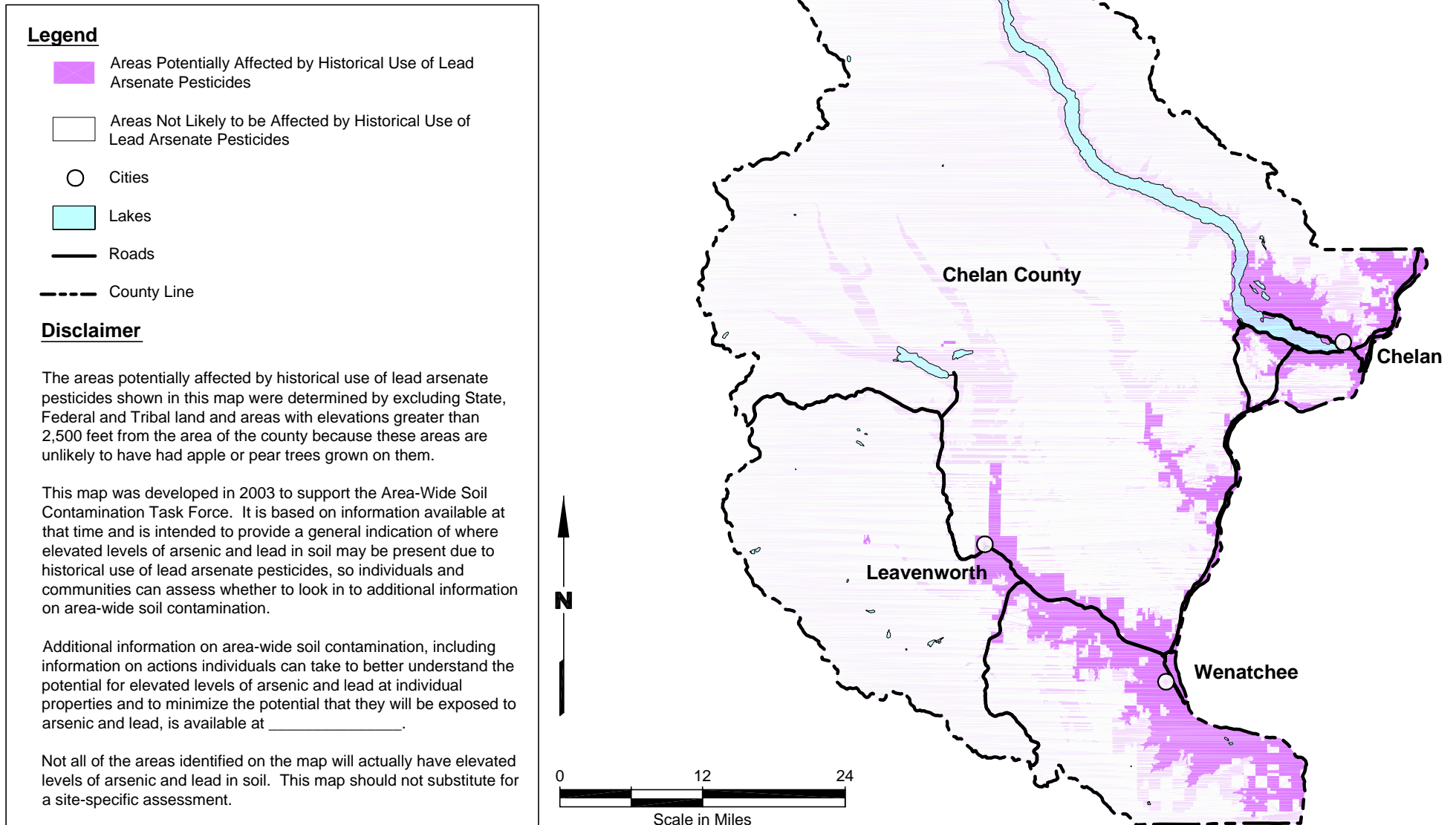








Figure 10: Areas Potentially Affected by Historical Use of Lead Arsenate Pesticide in Okanogan County

Legend

-  Areas Potentially Affected by Historical Use of Lead Arsenate Pesticides
-  Areas Not Likely to be Affected by Historical Use of Lead Arsenate Pesticides
-  Cities
-  Lakes
-  Roads
-  County Line

Disclaimer

The areas potentially affected by historical use of lead arsenate pesticides shown in this map were determined by excluding State, Federal and Tribal land and areas with elevations greater than 2,500 feet from the area of the county because these areas are unlikely to have had apple or pear trees grown on them.

This map was developed in 2003 to support the Area-Wide Soil Contamination Task Force. It is based on information available at that time and is intended to provide a general indication of where elevated levels of arsenic and lead in soil may be present due to historical use of lead arsenate pesticides, so individuals and communities can assess whether to look in to additional information on area-wide soil contamination.

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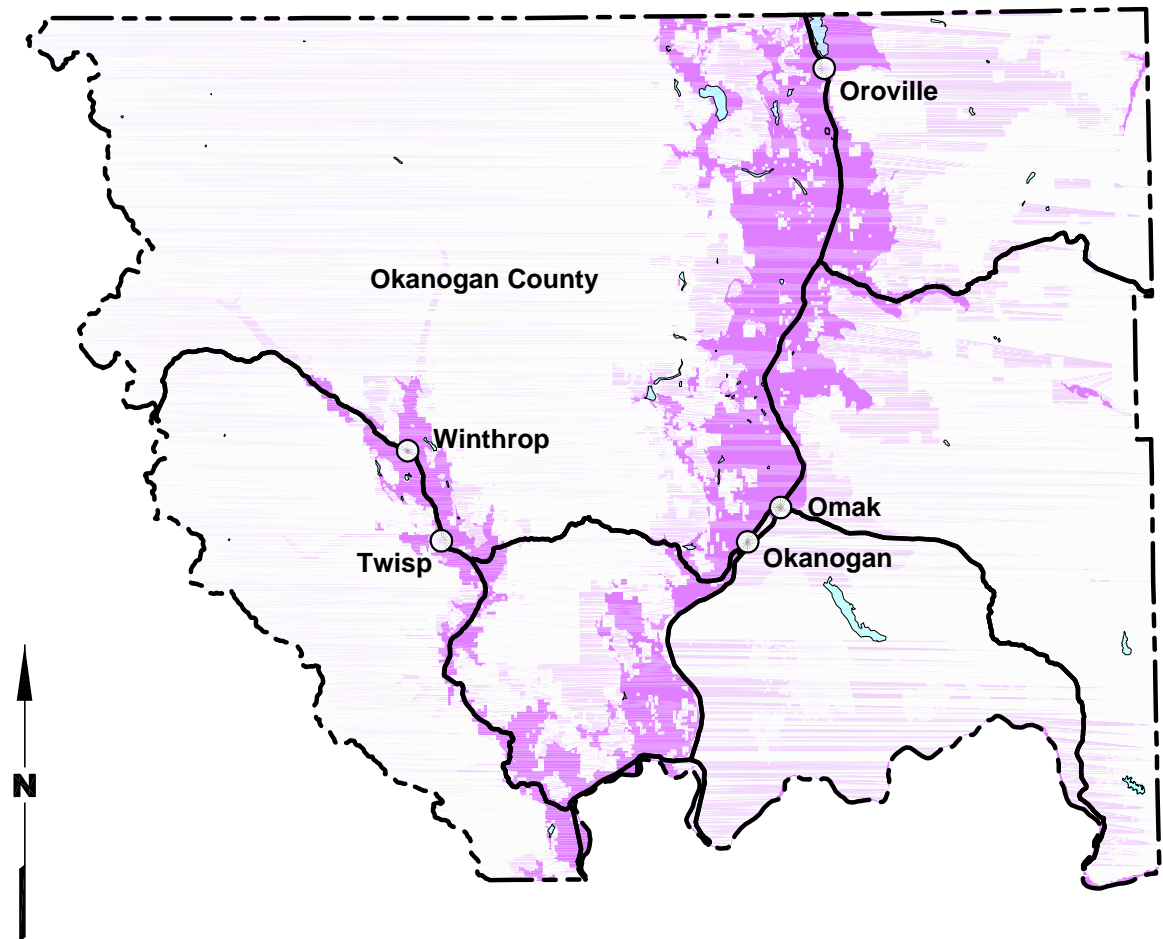


Figure 11: Areas Potentially Affected by Historical Use of Lead Arsenate Pesticide in Yakima County

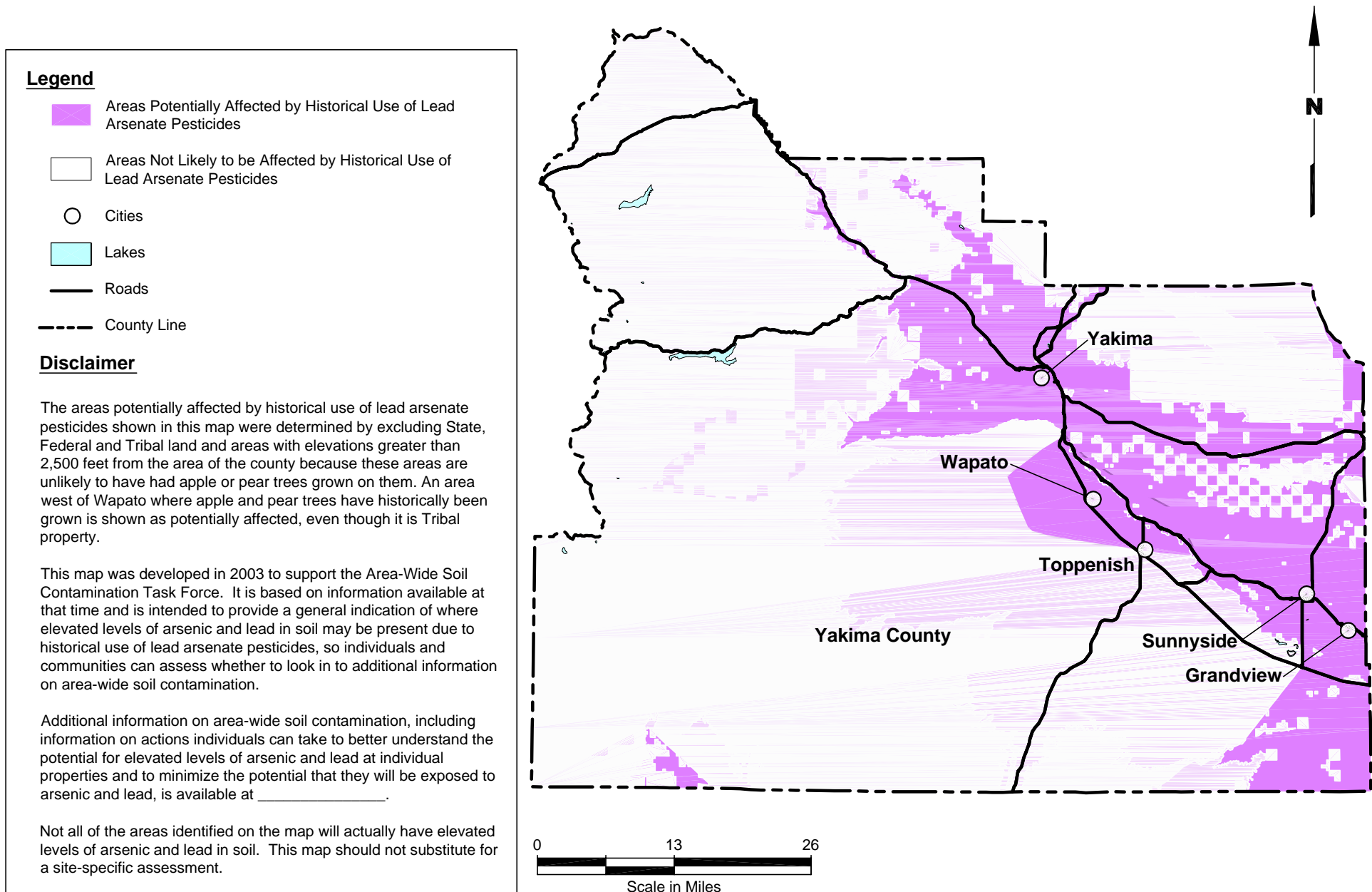
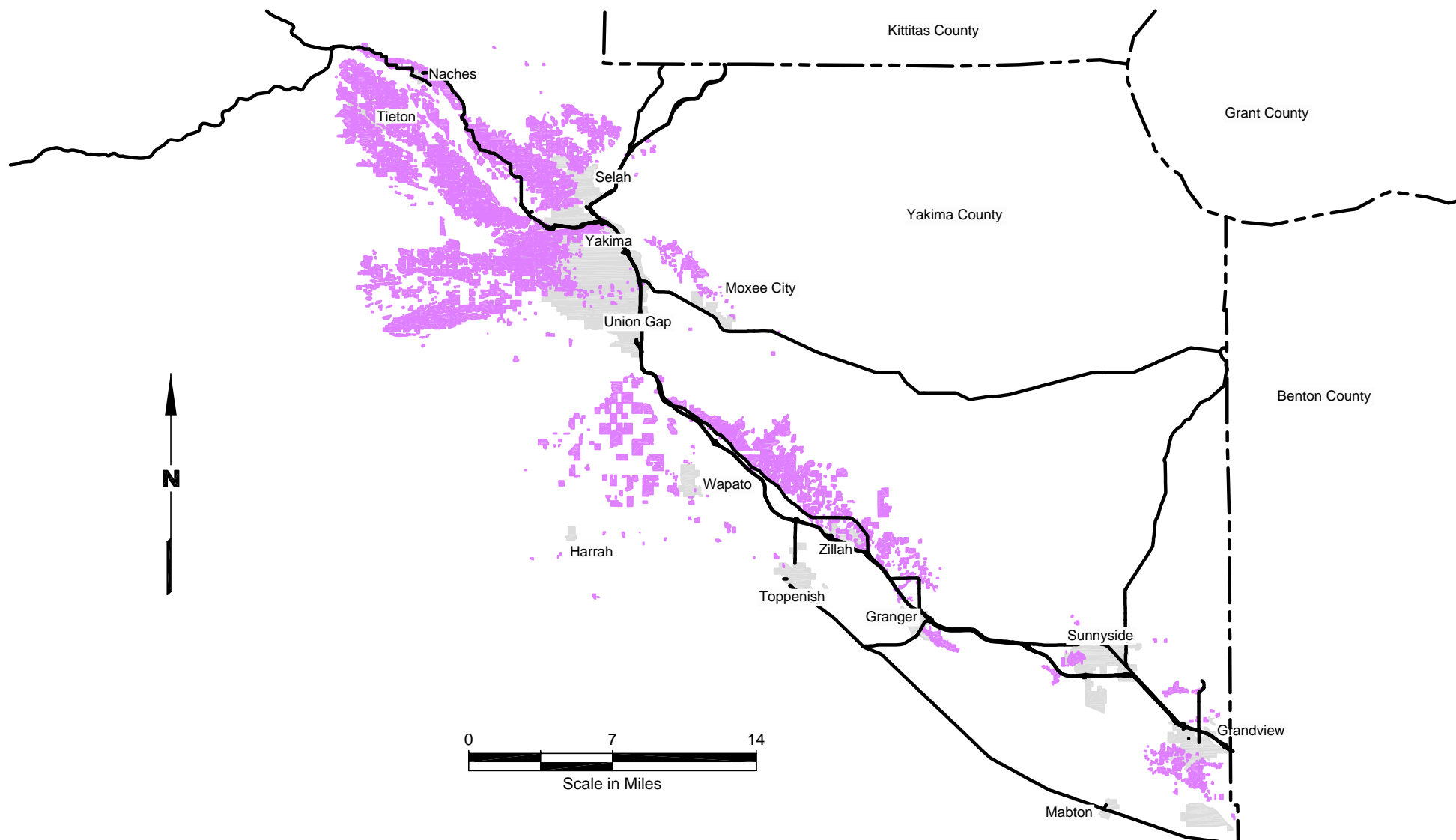





Figure 12: Historical Orchards in Yakima County Circa 1947



Legend

-  State or Federal Roads
-  1947 Orchard Lands
-  Cities

Disclaimer:

This figure was originally developed in 2000 by the Yakima County Geographic Information Services. It is based upon an analysis of historical aerial photographs and is intended to provide a general indication of where historical orchard areas were located in 1947, so individuals and communities can assess whether to look in to additional information on area-wide soil contamination.

Additional information on area-wide soil contamination, including information on actions individuals can take to better understand the potential for elevated levels of arsenic and lead at individual properties and to minimize the potential that they will be exposed to arsenic and lead, is available at _____.

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Figure 13: Historical Orchards in the Lake Chelan/Manson Area of Chelan County Circa 1947



Legend:



Historic Orchards, Based on 1947 Aerial Photographs

Disclaimer:

This figure was originally developed in 2003 for the "Historical Orchard Impact Assessment, Manson Area of Chelan County, Washington" report. It is based upon an analysis of historical aerial photographs and is intended to provide a general indication of where historical orchard areas were located in 1947, so individuals and communities can assess whether to look in to additional information on area-wide soil contamination.

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